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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,805

06/14/2006

Junta Yamamichi

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07/26/2010

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EXAMINER

PHAM, HOA Q

ART UNIT

PAPER NUMBER

2886

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,805	Applicant(s) YAMAMICHI ET AL.	
	Examiner HOA Q. PHAM	Art Unit 2886	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 16, 17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 16, 17 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/19/10 has been entered.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. Drawings filed on 2/19/09 are accepted.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-13, 16-17, 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuroda et al (US 2003/0132392).

Regarding claims 1, 9 and 17, Kuroda et al (of record) discloses a detection apparatus (figure 4) for detecting a target substance in a specimen, utilizing surface plasmon resonance, comprising: a target substance detection element (403), including: a base (101 of figure 1); and a metal structure (102 of figure 1) arranged on a surface of the base in a localized manner; and a target substance capturing body (104) fixed on a surface of the metal structure (102), wherein the metal structure has a cross section (203 of figure 2(b) or 701 of figure 7), and the metal structure has a thickness between 10 nm and 100 nm (par. [0028]); means (901-904 of figure 9) for bringing the element into contact with the specimen; and detection means (404 of figure 4, 911 of figure 9, 1007 of figure 10) for detecting the target substance captured by the element by irradiating the element with light emitted from a light source and observing transmission of the light.

Regarding claims 2-3, Kuroda et al teaches that the width of each metal part can be selected from the range of about 1-200 nm (par. [0029]).

Regarding claim 4, figures 2 and 7 of Kuroda et al teach that the plurality of metal structures are spaced apart from each other by slits (103).

Regarding claims 5-6, Kuroda et al teaches that width of each slit opening (103) is 1-200 nm (par. [0029]).

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Regarding claim 7; paragraph [0048] of Kuroda et al teaches that the metal structure (102) is made of a metal selected from gold, silver, aluminum or copper.

Regarding claim 8, paragraph [0028] of Kuroda et al teaches that the base (101) is optically transparent.

Regarding claim 10, see figure 1 for the use of a plurality of apertures (103) that are spaced apart from each other.

Regarding claims 11-12, see claims 2-4 above.

Regarding claim 16, see figure 4 for the use of spectrometer (404) and figure 8 for the use of CCD camera (808) and figure 9 for the use of photomultiplier tube (911).

Regarding claim 19, paragraph [0042] teaches that the target substance capturing body is an antibody.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 13 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda et al.

Regarding claim 13, Kuroda et al does not explicitly teach that the metal structure comprises an outer frame structure having an aperture and an inner structure arranged in the aperture and spatially separated from the outer frame structure; however,, it would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the outer frame with an inner structure because this is a matter of design choice to choose different arrangement whichever suitable for the device.

Regarding claims 20-21, since Kuroda et al teaches that the target substance capturing body is an antibody, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an antibody fragment having a multi-specific multivalent antibody because they are function in the same manner.

Response to Arguments

8. Applicant's arguments filed 7/19/10 have been fully considered but they are not persuasive. Applicant's amendment submitted with RCE in which the claimed invention can be read from the teachings of Kuroda et al as mentioned above.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kuroda et al (2008/0246970) is a div of Kuroda et al (2003/0132392) above.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOA Q. PHAM whose telephone number is (571)272-2426. The examiner can normally be reached on Monday through Friday, 7:00 AM TO 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on (571) 272-2287. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoa Q. Pham/
Primary Examiner
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HP
July 22, 2010

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